

CORNER OF THE PYRAMID, Temple of Xochicalcos

MEXICO'S LOST ATLANTIS

Recent Explorations and Discoveries by Prof. W. H. Holmes.

A FAMOUS STONE BRIDGE

Upon the minds of the eminent scientists at Washington there has dawned within six weeks the suggestion that a lost Atlantis lies in the ocean's depths between old Egypt and South America. The conclusion is growing that a link of land once connected these ancient countries, over which the knowledge of art and science which brought about the erection of the mysterious pyramids along the Nile was transmitted to the Aztecs, whose golden rule of South America ended with the coming of Cortez.

This latest sensation in scientific circles is the result of a highly successful trip of exploration in Mexico, just finished, by Prof. Wm. H. Holmes, head curator of anthropology in the National Museum at Washington, who is an authority upon all matters pertaining to prehistoric man in America, during which he investigated Xochicalcos, one of the most important and least known of the ancient Aztec cities of Mexico. Prof. Holmes brought with him a fine collection of photographs, ground plans, elevations and sketches in color, which go to show that Xochicalcos was a great fortified city, built, as were most of the an-cient cities of the far south, upon a hill,

cient cities of the far south, upon a hill, commanding a magnificent panorama of mountain, lake and plain. In describing his work Prof. Holmes stated:

"These ruins still bear evidence of wonderful skill in engineering, architecture and art; that Xochicalcos was a city of pyramids, temples, terraces, subterranean passages, splendid symbolic carvings and heroglyphics—all leading one to think involunglyphics all leading one to think involun-tarily of Egypt, and to question whether the marked resemblances are everywhere worthy subjects for study, and the earth teems with treasure to be won by the turn-ing of the scade.

A Famous Stone Bridge. "About daylight we started west, and

soon passed beyond the beautiful green the barren gray plateau. | former We crossed on our way several gorges, through one of which the River Tettarmi wound over a rocky bed, spanned by a stone bridge, famous all over the country stone bridge, famous all over the country as having been built by the Aztec peoples. This stone bridge is about eight feet wide,

"HILL OF FLOWERS"

forming such a connected system of declivities that appreach even now is extremely difficult. It would appear that all of the surfaces, as far as observed, were faced with stones and finished in plaster. As a rule, they are very steep, having an angle of at least 70 degrees, and in some cases sixty feet in height. The approach was made by stairways rather than by means of spiral pathways. The crumbling remnants of these stairways are seen at various points, especially on the north side

various points, especially on the north side of the hill.

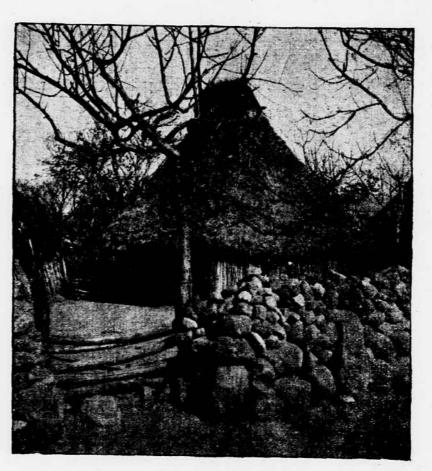
"The summit of the hill comprises an area of about one-quarter mile, and consists of two or three flat inclosed areas or plazas, which have been surrounded in most cases by rows of buildings, standing close to the which have been surrounded in most cases by rows of buildings, standing close to the outer edge and adding much to the impregnability of the fortification, if such, indeed, was the true character of the place. The buildings on the higher levels are entirely in ruins, but on the second level on what appears to have been the main plaza on the hill stands the ruins of a temple, and be-

tionalized in a manner so simple and sincere as to rouse the utmost enthusiasm, and the design is arranged and distributed in the spaces to be filled in a manner call or political life of the people—in fact, that reveals a keen sense of symmetry and that reveals a keen sense of symmetry and proportion. Cut with the chisel of a master, in strokes bold yet sensitive, it stands revealed, a masterpiece of decorative symbolic art. The main band of scalpture consists of eight great feathered serpents, two on one side, the heads being at the four corners, turned inward. Separating the send decoratively rendered; feathers droop from the end of the muzzle and form a fringe the end of the muzzle and form a fringe about the neck; from out his open mouth is hung a highly conventionalized forked tongue, while the rendering of the feathers upon his body, varied according to the space to be filled, but always good, are a delight to the eyes of a modern decorator, used to the frivolous decorative motives and metheds of the modern world. Sitting and metheds of the modern world. Sitting and metheds of the modern world. Sitting and metheds of the modern world. used to the frivolous decorative motives and metheds of the modern world. Sitting with crossed legs upon the last loop of the serpent's body is a human figure, wearing a highly ornamental headdress, clasping to his breast some object not now distinct. The tail of the serpent is erect, bearing a fine burst of drooping feathers. Every form is worked out with the utmost care and displays a keen appreciation of sym-metry, line and composition. Flat Band of Carving.

"Above this fine decoration is a projecting that band of carving, some two feet in helght, having upon it a repeat design of a cross-legged buman figure, looking at and holding by one hand a basket-like object that rests upon the ground beside the fighieroglyh, all carved with the same attention to details and sense of propo-shown in the larger subject below; snown in the larger subject below, the projecting cornice above this vertical band being decorated with a repeat of either the feather form or eise a highly conventionalized form of the rattlesnake's diamond, in

perfect harmony with the rest of the design. The walls of the upper temple probably repeated those below.

"The dwellings of the common people extended far down the slopes leading to the valley below, while on the terraces of the



A NATIVE DWELLING. Photograph by Prof. G. K. Gilbert.

fields, latticed with the life-giving irriga- side it a large mound, which doubtless in ranean galleries that penetrate the bill on times supported a structure of

The Ruined Temple.

"The better preserved temple is not at

the north side. Five gaping mouths were found, but two only were entered, and but one presented features of extraordinary interest. The entrance of this is in the face of the terrace wall, near the base of a wall nearly sixty feet in height, and is irregular near the surface, though soon developing into a gallery ten to twelve feet wide and about eight feet in height, with commented floor and plastered wals. Ascending a few steps to a higher level, the visitor finds himself in a roundish coamber twentyfour feet or more in diameter, with a rounding ceiling ending in a chimney-like opening leading to the top of the plaza above, Puerta del Sol fared no better, and all outfour feet or more in diameter, with a round-

leries that surround three squarish, irregu-lar columns that support the roof, and at press in Madrid. the farther end some 200 feet from the entrance is another dome-like chamber opening up to the surface, the exact spon upon the terrace being indicated by the smoke that rises when a fire is built in the chamber opening that rises when a fire is built in the chamber opening when, singularly enough, the mobs had not



ANCIENT BRIDGE OF THE RIO TETTARMI. Photograph by Prof. G. K. Gilbert.

and supported by three stone arcaes, the latter indicating clearly that the bridge is not pre-Spanish, as no such arches were known to the ancient peoples of 'hat region. The cressing of the bridge requires a steady head, for, although it is some thirty feet above the river, it has no rails. Some 200 feet above the river is the ancient and exceedingly primitive village of Tettarani, which is known to have been occupied ever since the coming of the Spanish by Indians of unmixed blood, speaking the ancient language, and doubtless building after the original fashion. The women of the town bring their washing lown to the river, and carry all the water used for household purposes up the 200 feet of steep and tortuous path to the town above. The huts are made of upright reeds or sugar cane, tied together and thatched. They also use a mixture of stones and adobe where necessary.

The Hill of Flowers. "Three miles beyond the village we approached the object of our quest, Xochfoalcos, the 'hill of flowers,' which is the site of the ancient ruin we had come to explere. The 'Hill of Flowers' and 'Scorpion Hill' stand side by side connected by a saddle-like ridge or divide. At the right hand there is a steep descent into the baranca, or canon, through which a small river makes its way out into the plains beyond. It is seen at first glance that the forms of these hills have been modified by human hands, especially the 'Hill of forms of these hills have been modified by human hands, especially the 'Hill of 'Ail that remains of the temple itself Flowers,' by a series of terraces extending are portions of the walls at the corners, and from base to summit. Approaching from the north, the ascent was made by trail, in the saddle, zigzagging from terrace to stands. The doorway, of which only porthe north, the ascent was made by trail, in the saddle, zigzagging from terrace to terrace to the top of the hill. Here for the first time the true character of the ancient work is observed. The hills found to be quite irregular in form, having table-like spurs extending of to the control of the spurs extending of the the control of the c like spurs extending off to the west and south—the elevation on these sides reaching six to eight hundred feet from the river bed. So far as can be seen every part of the surface has been modified by the ancient builders, and the circumference of the hill at the base must be at least two

The System of Terraces.

"The first impression received is that the terraces may be continuous, forming a spiral road from base to summit. But this is not the case, and they are continuous only where the surface admits of symmetrical treatment. They are disconnected and of irregular elevation, yet altogether

"The profile of the building displays some striking characteristics. The wails rise from the surface of the plaza, so far as can now be seen, and slope inward at an angle of 70 degrees, to a height of ten or twelve feet. Above this a slightly projecting course of large stones rises vertically, and this course is surmounted by a correct

and this course is surmounted by a cornice nearly two feet in height, sloping outward at sharp angle. On the west front are the remains of a great stairway, built of large and well-cut stones, well preserved below, but in an advanced state of ruin above, so that the number of steps cannot be deter-mined, though it evidently led to the level of the pyramid, and the front of the temple

must have been divided by two

columns supporting lintels of wood or stone Symbolic Temple Decorations.

"The stones have been well cut and the massive walls laid with great precision, but the feature that gives character and interest to the structure is the carving that cov ers the entire surface from base to summit. It is a unique and beautiful specimen of the symbolic temple decoration of the ancient peoples. The principal design used upon the temple is that of Quetzelcoatl, the feathcred serpent, god of the Aztecs-quetzel meaning bird, and coatl, snake. meaning bird, and coatl, snake.

The bird and serpent in one is convenmay have been retreats from the excessive see for a week.

Some of the Wayside Waifs. Photograph by Prof. G. K. Gilbert. and there is no knowing what astonishing features may be developed by future ex-

pioration. "There is also no determining to what use one may turn his imagination loose, and no one can, with authority; say him nay. Dominated by Aztecs.

"It is not known weether this hill was really originally occupied by the Aztec people, but at the time of the conquest this region was dominated by the Aztecs. In region was dominated by the Aztecs. In general the spaces between the undulations of their bodies, are symbolic figures and hieroglyphs. The serpent's head is surmounted by an elaborate and effective comb; his wide-open mouth has teeth most its resorts. Whosever they were, there can be no doubt on the part of him who can be no doubt on the part of him who studies these ruins that they were a numerstones.

"Baucroft, in The Native Races, says of the advanced civilization of the Mexican Indian at the time of the conquest by Cortez: "On the tablelands of Mexico and Cen-

"On the tablelands of Mexico and Central America the first Spaniards found nations well advanced in science, art and interature—nations that laid out large cities in streets and squares, with public market places; nations that built magnificent palaces and temples of hewn stone and lime, and left as architectural remains here monuments and supendous tunuil; lime, and left as architectural remains huge monuments and stupendous tunnil; nations well skilled in the working of metals, and whose jewelers rivaled the Venetian gold workers of the period; nations that spun and wove delicate textile fabries, and produced mosaic feather-work that was the marvel of the civilized world; nations that were governed by august potentates, and whose kings and emperors were surrounded with a pomp and courtly etiquette as great as that of any European prince; nations with a palpably progressive civilization, with civil and religious politics of no mean order, and whose inpolitics of no mean order, and whose in-stitutions often resembled these of the old

"Such was doubtless the civilization rep-Such was doubtless the civilization represented by this great city, stamped out of existence by the ruthless nordes of Spanish soldiery, who, in the name of religion, perpetrated atrocities that put the so-called savages to blush—and obliterated a civilization not so far behind their own in advancement, destroying where resulting

zation not so far behind their own in advancement, destroying, where possible, every relic of the doomed race.

"Time and the elements have, of course, done their work of destruction upon what the Spaniards left of the beautiful temple, but the sugar planter has done more to destroy the building, as the stones scattered and broken far and wide on the hillsides are built into walls and builting testibute. and broken far and wide on the hillsides and built into walls and buildings testify. "The view to the west from the 'Hill of Flowers' is another of the superb pauramas of mountain ranges; snowy peaks glittering in the sunlight, beautiful lakes and tragic, desolate foregrounds, veiled in the epalescent mists of the dry season of that far southern country. On the trip I was accompanied by Prof. G. K. Gilbert of the United States replaced surveys and Major United States geological survey and Major C. E. Dutten of the ordnance department, and we were the guests of Col. G. W. Breckenridge of San Antonio, Texas, who annually takes extended outings in Mexico in his private hunting car Fern Ridge."

WARTIME IN MADRID. Description of Exciting Scenes in the

Spanish Capital. From the Century.

As long as the popular demonstrations in the streets of the capital and other great towns were limited to patriotic expressions of opinion, the government looked on, and did not care to interfere actively. It dawned upon the authorities at last that these demonstrations were being used by wirepullers for other than patriotic purposes. But matters came to a climax when the war actually broke out, and the government could no fonger let the capital of Spain be night after night under mob-law for hours, street traffic suspended in the main arteries of communication, shops and afes hurriedly closed for fear of disturbinces, and theaters nearly empty, since the patriotic mobs had got into the habit of forcing their way into them to insist upon the bands playing the "Cadiz March," while all the audience stood and cheered in self-defense. The mobs grew nasty one American emblems be torn down Their cries were complied with. Everyhing American was taken away, and a notice put up warning all trespassers that the land and buildings were mortgaged

but at present clogged with debris.
"A gallery on the right is closed with rubbish, and to the left we entered a passage at first low and irregular, but further on becoming wider and loftier and somewhat more symmetrically worked out into galarines that surround three transfer or passage and are symmetrically worked out into galarines that surround three transfer or passage of representatives of the American of the passage of the passa

All of these chambers appear to have thought fit to cheer themselves hoarse until hewn out of the solid rock, though der the windows of Gen. Weyler, the advobeen so violent as usual; only they had been hewn out of the solid rock, though there may have originally been natural cavities. The floor appeared to have been leveled up with cement, the walls evened up with masonry, in some cases with much care, and in others evidences of color have care, and in others evidences of color have been employed as decaration. care, and in others evidences of color having been employed as decoration.

"In many places there are walled-up galleries, while others were filled with debris, de San Geronino, opposite the cortes, where Sagasta had been living for some time. They hissed and yelled to their hearts' content at some distance, kept back by the police and the civil guards, who charged them with drawn swords. The charged them with drawn swords. The mob made by side streets for the Calle de Sevilla, where they hooted Senor Aguilera. He had just left Sagasta, after obtaining the assent of the cabinet council to surrender his powers into the hands of the military authorities, as he confessed that he could no longer control the turbulent

elements of the capital.

I went to the Puerta del Sol some min-I went to the Puerta del Sol some minutes after the governor had been so roughly welcomed by the crowd in the Carrera de
San Geronimo. Right across the Sevilla
Street were fifty mounted civil guards like
motionless statues, flanked by companies
of foot police, and beyond I could see the
mob surging about the Cuatro Calles,
where four streets meet. Hisses, whistles
and hooting rose on the night air. Every
balcony was full of people. My tramway
car soon pulled up orposite the Casino behind seven others, all whistling yamly for hind seven others, all whistling vamily for free way. The crowd of well-dressed peo-ple and better-class workmen would not disperse, and sulkily exclaimed: "Get out of the cars and join as in showing your patriotic feelings against these govern-ments." At last, when many of the occu-pants of the cars were looking nervous, a tramway conductor happily cried out, guards are coming!" and away rushed the

Dived Into Molasses. From the St. Louis Republic.

That man who arranged the entertain ment at the Elks Club, which took place last night, deserves a medal.

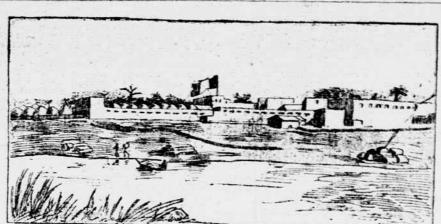
Two hundred men, after an elaborate banquet, watched five colored boys dive into a washtub lof molasses, eat soda crackers without a drink of water until they were near bursting, and swallow pie until all, save one, were compelled to give up the contest.

The pie and cracker races were not new but they were amusing. The bout which took the negroes into the tub of molasses was a novelty, however. None of the men

was a novelty, however. None of the men present ever saw one before.

The boys were lined around the tub, and at a signal jumped for the money, which was at the bottom. It could not be seen, and as they were bound hand and foot, they could search with their mouths only. When they came out of that tub they looked as if they had been in a syrup barrel all their lives. Their wool was stuck fast, and they were unable to open their eyes. They could hear the coins strike the molasses, though, and when a shower of dimes and nickels struck the surface they ducked

They kept this up for nearly an hour.
By that time they were so stuck up that it is doubtful whether they will be able to



six-brag of their "petit Jules," the com-mandant, and sit around the taverns swap-

Sword Presented Major Marchand.

ping anecdotes of his youthful promise. How he rescued his brother from the river,

how he helped to put out a fire in a stable, how he rebuked a socialist agitator for in-sulting the army, and all the rest, they father on to petit Jules the entire ance-dotal stock of the village.

As a Boy.

Certainly the young man's history is a

pleasing and instructive one. Having at-

tended the village school up to the age of

twelve, Jules Marchand was admitted as what we would call a charity student (boursier) to the College of Thoissey. He

could only stay one year, however, as his father needed his aid. As a notary's cierk at \$12 a month he remained patient and

at \$12 a month he remained patient and dutiful, but utterly dissatisfied, continually reading travel books and stories of adventure. One day his employer said to him: "My dear Jules, you are intelligent, and have many qualities, but unhappily they are not those which justify the career of a notary. Enlist and go to one of the colonies. There your aptitudes will have a chance, and you may perchance make

e came out number four from the Ecole

des Sous-Officiers of Saint-Maixent, a sub-

in the middle of the blank desert of Bar-

its monotony and discomfort by means of an exploring expedition into the Soudan. In 1889 he distinguished himself at the tak-

ing of the fortress of Koundian, where his wounds and his valor won for him the cross

of the Legion of Honor. In 1890 he return-

ed to France, after having opened the route to Timbuctoo. He obtained the grade of

first lieutenant, and departed again for Af-

rica. In 1891 he was under the walls of Nioro, vanquishing the Sultan Ahmadou.

MARCHAND AT HOME

How the Parisians Regard the French African Explorer.

RESULT OF THE DREYFUS SCANDAL

Why France Was Compelled to Give Up Fashoda.

THE SOLDIER PATRIOT

Special Correspondence of The Evening Star.

PARIS, June 8, 1890. Marchand has arrived! They have not made the Boulanger of him that they had hoped; on the other hand, the partisans of his "just glory" have no reason to complain. In a way, the hero of Fashoda may be called the Dewey of France. You will answer that Dewey accomplished somethirg? Well, the French are very much in need. They are welcoming the gallant commandant, not so much for what he did as for what he might have done. In any ease, a glimpse at the French mind in the present crisis is not without its picturesqueness.

For these generously patriotic French nen, Marchand is not only the intrepid soldier and great explorer who, at the price of superhuman fatigues and privations, unimaginable obstacles and perils, planted the three colors on the walls of Fashoda; he is



Major Marchand.

lso an embodiment of that aspiring, halfdespairing France that hops, almost against hope, to keep up with the procesself-defense. The mobs grew nasty one night, and it the Sevilla and Alcala streets, the Madrid Broadway, demanded that all American emblems be torm down destiny seems to hold in reserve, who will rise, in his proper hour, to stigmatize the regime of intrigue and corruption, untruth and cowardice under which France suffocates." All of which seems strange to an outsider. Certainly there must be many other honest and brave officers in France Marchand cannot be such an exception!

Marchand and Dreyfus. The argument seems to be something like this: At the hour when France was feeling most keenly the humiliation of the ugly Dreyfus imbroglie, Marchand was doing clean work, to the honor of his country, in central Africa. It is refreshing to gaze at him. Here we take leave of sense o enter the domain of rhetoric. Those who are rooting most vehemently for the com-mandant, the anti-Semites of the Drumont-Rochefort type, argue that the refreshing contrast is against the dark picture of the plot to save Dreyfus. 'In obliging this heroic officer to give up to the English ashoda, his glorious conquest; in inflicting on him such a humiliation before the enemy, how could the band of internationa tramps doubt that the band of International tramps doubt that the France of Du Guesclin and Bayard, of Jeanne d'Are and Napoleon, oppressed and soiled by a herd of politicians in the pay of financiers, would nevertheless immediately see herself reborn in him and sea in him the him and see in him the very image of

the patrie!" They even make a contrast between Marchand and Dreyfus. Dreyfus is the son of millionaire parents; reared in abundance, he was able to pursue the higher studies reserved for the formers. erved for the favorites of fortune, Marchand is the son of a little country carpenter; through a youth of labor and privation he was able to gain only a secondary educaa youth of labor and partial to gain only a secondary education, with one year of college. Drayfus came out of the Polytechnic School a subeutenant, and had only to let himself drift o arrive at the highest grades. Marchand, after working five years as a notary's elerk, volunteered as a private and con quered, one by one, his stripes, only by prodigies of will power, work and courage.

Marchand at Fashada. willingly, the popular hero who should resse cartoon had touched him. "One hour after having opened those newspapers the ten French officers were weeping and trembling. There we first learned that the Dreyfus affair had been reopened, with a horrible campaign of infamies. And during thirty-six hours not one of us was able to

say a word to the others!"

When, on his return to France, Capt. Baratier brought back the order to evacuate Fashoda, the scene was again a sad one Baratier did not dare to look at Marchand The latter, with a presentiment of bad news, sought to pet trate the bottom of his comrade's soul. Then Baratier de-jecedly let fall his arms. Marchand understood. He seemed to grow wild with rage, The two walked away. Let us respect the torture of the first interview! From that moment, however, Marchand became silent and during the dinner offered to him by M. Thovenet, chef de service of the Suez Canal Company, the brave officer could not retain

the argument, to persuade Marchand and the people of France that, had not the Dreyfus affair divided the country France would not have been obliged to give up Fashoda to the English, On the one hand Fashoda to the English, On the one had Dreyfus. On the other hand Marchand.

The Explorer's Family. The exploitation of the poverty of the

youthful Marchand is being carried on with energy. Thoissy is a nice enough little village in the Burgundy district. Here Mar chand was born, and here still lives his sister Constance and his father. A brother, Auguste, is a government clerk at Bamako. Another, Constant, fifteen years of age, is preparing to enter the navy. A third brother, Petrus, a non-commissioned officer, was killed in the Soudan in 1895. As to the pere Marchand, the French papers say that he is simplicity itself. "To all the compli-ments addressed him on the extraordinary exploits of his son, he responds, smiling:

and in reducing France's young and con-fiding ally, Tieba, to the condition of an impotent vassal, his time was not spent in vain. Returning to France, he was named captain, received the decoration of the Academic Palms and the cross of Nicham-Iftikar. His Life's Dream. In 1893-24 Captain Marchand was spendme his time unsuccessfully over his trans-Niger project-the water route by which he proposed to unite the Niger with the Gulf of Guinea, the central Soudan with the ocean. He had not counted, however, with the redoubtable Samory. At the end

with the redoubtable Samory. At the end he wrote: "I am played out, finished, crazy with farigue and suffering." Returning to France, he was named officer of the Legion of Honer, and charged with important works for the ministry of the colonies. However, and charged with important works for the ministry of the colonies, the ministry of the dark continent, of planting the French flag on the Nile. The English were advancing from below. Marchand would advance from above. The "But it's quite natural, what he has done."
A little, nervous, gray-haired village carpenter, he carries his fifty-eight years gallantly, drinking his glass and singing his song. He no longer works. The government has given him a retail tobacco store (government propogetal) which brings in an chand would advance from above. The rest is known, his long trip ending in the capture of Fashoda-and its cession to the (government monopoly), which brings in an income of \$280 a year. Tholssy, a town of 1,500 inhabitants, is situated poetically on the pretty little river Chalaronne, near to where it empties into the Saone. There is no fresher, cleaner or more smilling country than this little corner of France. In the home of "victorious Burgundy"—a cheery, heady wine—the strong, good-humored people—three-bottle men, and four and five and six boar of their "ratif talks"; the com-The English officers, steaming up the

resident in the capital of the young King Tieba, Marchand arrived at Sikasse in the same year. It was a lively year for him, spent in leading war parties, outwitting na-

tive diplomacy and protecting his life from assassination; but as he succeeded in kill-ing and plundering several native kings

The English officers, steaming up the river in imposing gunboats, resplendent in clean uniforms, came to pay a call upon the wayworn, tattered Frenchmen, with their little band of darkey porters. They brought gifts—canned salmon, pickles, bottled beer—and a bundle of oid newspapers. Ah, the terrible brony—perhaps unintentional—of that gift of the bundle of old papers! But the Frenchman—and it takes a Frenchman for such things—managed to return from for iroay, gently, courteously. He wrote to General Kitchener the following letter, accompanying with it a noble

He wrote to General Kitchener the following letter, accompanying with it a noble supply of fresh vegetables:

"My General: I have just learned that you left us a case of beer. I am profoundly touched with this delicate attention, although we are abundantly supplied with everything. Permit me to offer you, in friendly exchange, the modest products of our gardens, green vegetables, which you may be lacking in Omdurman."

(The meaning is, of course, "Fashoda is ours. We got here first. We have been here long enough to grow vegetables.")

The bon mot will have to compensate the French for the loss of Fashoda.

STERLING HEILIG.

STERLING HEILIG.

HOMESICKNESS IN THE ARMY. Some Comparisons Between Civil War

"I don't remember," said a civil war vet-

Times and the Present. From the New York Sun.

eran. "that soldiers in the army in the civil war in this country suffered greatly from homesickness, about which we have heard more or less in the recent Spanish-American war from our armies in Cuba and the Philippines. I may be mistaken about this, however. It is quite a spell now since the civil war, and I find that, while some of

my recollections of it are still perfectly vivid, others, if not fading, are at least hazy. Then, I am not myself constitutionally liable to homesickness. For these reasons it may be that I am mistaken; but I find my impression to be that the men in those armies did not suffer so much from homesickness as the men in the armies in the recent war have suffered. I don't sup-pose that men have substantially changed in the meantime, but certainly the means of communication have greatly improved, and I imagine we get many more details of army life nowadays, as of everything else, than we did then; that is to say, that along with news about many other things of interest, we get more about homesickness than we got then, and that may account in some measure for the present ap-

a chance, and you may perchance make something of yourself."

With the consent of his family the young there actually regiment Within Within teant. In nguished toton. In minition in from their own land, worth the country, away from their native land; that even in lands less distant from their own homes than many parts of their own land would be they mech land. man volunteered as a private in a regiment of marine infantry at Toulon. Within three months he was corporal. Within three months more he was sergeant. In the cholera year of 1884-5 he distinguished himself by his courage and devotion. In 1886, after passing a brilliant examination, he can also to the contract of the their own land would be, they might have a feeling of greater remoteness if there was a sea intervening, and so be more inclined

to homesickness. Ordered to Senegal in 1888, Sublicutement Marchand was for six months in command of the Cold foresters are not supported by the Cold foresters. of the God-forsaken Fort N'Diago, situated | different surroundings, the vegetation, instance, very different from that to which we had been accustomed; but as I recall writes Gen. Frey, "feels the same involuntary shudder, the same shifter presentiment of disgust." Marchand escaped from ment of discomfort by means of there was no occasion to think of them. Perhaps we should have felt differently if

we had been beyond an intervening sea.
"But here's where the better modern
means of communication comes in again,
and where it ought to be of some use. Different men have different ideas of dis-tances, and what might seem far to one rica. In 1891 he was under the walls of Nioro, vanquishing the Sultan Ahmadou. In 1892 he captured Diona, delivering Capt. Hourst, who had been there three months besieged. In this fight Marchand was again seriously wounded. Sent as French still in touch with home."

SIR WILLIAM CROOKES.

The English Scientist and the Deeds That Made Him Famous. Sir William Crookes, the English scien-

tist, whose success in producing something akin to an absolute vacuum in the course Prof. Crookes laid the wires for these of his experiments in radiometry years ago rendered the incan lescent electric light a possibility, is almost as alert and active at sixty-seven as he was at forty. He began is radiometer, and the carbon filaments used were made by dissolving cellulose in a serious scientific study when only a boy, the then renowned chemist, Dr. Hofman, being his instructor.

noteworthy achievement was the discovery of a new metal, thallium, which he found in 1861 when only twenty-nine. This led, in 1862, to membership in the celebrated were two reasons for their fallure-first Royal Society, and placed his name on the roll of successful scientists. A little later he devoted much attention to the spectroscope, and still later to rare earths. His Marchand at Fashoda.

The point of departure for making the Commandant Marchand, willingly or unwillingly, the popular hero who should rescue the cause of the stay-at-home etatmajor was certainly his now famous letter. major was certainly his now famous letter minating in disks. The tube being virtually produced in the presence of Anna Eva Fay to the artist Forain. It was on the 21st of September, at Fashoda, when the Marchand party, having been ten months without news of Europe, received, through the courtesy of Engish officers, a bundle of old newspapers. "I have only two lines to add," wrote Marchand to the French artist, whose cartoon had touched him. "One hour officers with some despendence of the produced in the presence of Anna Eva Fay and other mediums. He seems to have accepted spiritual'stic theories with some despendence of September, and the presence of Anna Eva Fay and other mediums. He seems to have accepted spiritual'stic theories with some despendence of September, and other mediums. He seems to have accepted spiritual'stic theories with some despendence of September, and other mediums. He seems to have accepted spiritual'stic theories with some despendence of September, and other mediums. He seems to have accepted spiritual'stic theories with some despendence of September, and other mediums. He seems to have accepted spiritual'stic theories with some despendence of September, and other mediums. He seems to have accepted spiritual'stic theories with some despendence of September, and other mediums. He seems to have accepted spiritual'stic theories with some despendence of september, and other mediums. He seems to have accepted spiritual'stic theories with some ceptember, and other mediums and other mediums. He seems to have accepted spiritual'stic theories with some cepted spiritual'stic theories with some ceptember, and other mediums. He seems to have accepted spiritual'stic theories with some ceptember, and other mediums. He seems to have accepted spiritual'stic theories with some cepted spiritual'stic theories with some ceptember and other mediums. He seems to have accepted spiritual'stic theories with some ceptember and other mediums. He seems to have accepted spiritual'stic theories with some ceptember and other mediums. He seems to have accepted spiritual'stic theories with some ceptember and other mediums. He seems to have acce

is possible only through Crookes' method of exhausting the tubes of air.

Soon after his work with the radiometer Crookes became interested in electrical illumination, and his house in Kensington park gardens was the first to be lighted with incandescent lamps in all London. lamps himself in 1881, and they gave forth practically the same quality of light as Edison's lamps. The vacuum in the bulbs was strong solution of ammonium copper sul-phate, drying the solution into sheets and then dissolving out the copper. The horn-The young man's earliest investigations like residue served the desired purpose adwere along photographic lines, but his first mirably. At last accounts the Crookes filanceworthy achievement was the discovery ments, produced in an entirely different way from Edison's, were still doing good service, but the Crookes electric lamps have never come into general use. the financial weakness of the company formed to exploit them, and, second, the action of the courts in passing adversely

upon the patents.

Sir William Crookes has spent much of



SIR WALTER CROOKES IN HIS LIBRARY